

Express Mail Label No. EV156916060US
Atty. Docket No. 5614.06
Application No. 09/865,995

REMARKS

This Amendment and Response to Office Action is submitted to address the rejections issued in the Office Action of August 5, 2002. A Terminal Disclaimer and Petition for Three Month Extension of Time are submitted herewith.

Claim Rejections

The Examiner rejected claims 10, 12, 16, 23, 24, 36, and 47 as indefinite under 35 U.S.C. § 112, 2d ¶. As to claim 10, the Examiner rejected claim 10 as reciting the limitation "said reaction" without antecedent basis in the claim. Claim 10 has been amended to recite "said decomposition" and accordingly this amendment is believed to overcome this indefiniteness rejection.

As to claim 12, the Examiner rejected claim 12 for the use of the term "an additional membrane." Claim 12 has been amended to recite "a membrane" and accordingly this claim amendment is believed to overcome this indefiniteness rejection.

As to claim 16, the Examiner rejected claim 16 as having insufficient antecedent basis for the limitation "said inlet gas." Claim 16 has been amended to recite "vaporized N₂O" and, accordingly, this amendment is believed to overcome this indefiniteness rejection.

As to claim 23, the Examiner rejected claim 23 as lacking sufficient antecedent basis for the limitation of "said throttling device." Claim 23 has been amended to recite "said second throttling device", and accordingly, this amendment is believed to overcome this indefiniteness rejection.

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As to claim 24, the Examiner rejected claim 24 as lacking antecedent basis for the term "said valve." Claim 24 has been amended to recite "said first throttling device", and accordingly, this amendment is believed to overcome this indefiniteness rejection.

As to claim 36, the Examiner rejected claim 36 as indefinite for use of the phrase "an additional membrane." Claim 36 has been amended to recite "a membrane" and this amendment is believed to overcome this indefiniteness rejection.

As to claim 47, the Examiner rejected claim 47 as lacking sufficient antecedent basis for the limitation of "said throttling device." Claim 47 has been amended to depend from claim 34, and claim 34 recites "a throttling device", and therefore, this amendment is believed to overcome this indefiniteness rejection.

Accordingly, the amendments to claims 10, 12, 16, 23, 24, 34, 36, and 47 are believed to overcome the Examiner's indefiniteness rejections and it is respectfully requested that such rejections be withdrawn.

Response to Obviousness-type Double Patenting

The Examiner rejected claims 1-47 under the traditionally created doctrine of obviousness-type double patenting in view of United States Patent No. 6,347,627. The Examiner indicated that a timely filed Terminal Disclaimer may be used to overcome this rejection. Accordingly, a Terminal Disclaimer is submitted herewith and is believed to comply with the applicable patent regulations. Accordingly, it is respectfully requested that the obviousness-type double patenting rejection of claims 1-47 be withdrawn.

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Conclusion

In light of the above, it is believed that this Amendment and Response to Office Action has fully addressed the particular rejections lodged by the Examiner. Accordingly, withdrawal of these rejections is respectfully requested.


No additional fees are believed due for this Amendment and Response to Office Action beyond the attached fees for the Three Month Extension of Time and Terminal Disclaimer. If any additional fees are due, please charge Deposit Account No. 04-1415 the required fee.

If the Examiner has any questions regarding the above, please contact the undersigned at 303-629-3407.

Attached hereto is a marked-up version of the changes made to the claims by this Amendment. The attachment is captioned, "**Version With Markings To Show Changes Made.**"

Respectfully submitted,

Date: February 5, 2003



James A. Pinto
Registration No. 40,774
DORSEY & WHITNEY LLP
Customer No. 20686

Version With Markings To Show Changes Made

In the Claims

10. (Amended) The system of claim 9 further comprising a control system in communication with said reactor and said first throttling device for insuring sufficient flow to said reactor to sustain said [reaction] decomposition.

12. (Amended) The system of claim 1 wherein [an additional] a membrane after the reactor is added to enrich the percentage of oxygen in the breathable gas mixture.

16. (Amended) The system of claim 1 wherein [the] an effluent gas from said reactor is passed adjacent said [inlet gas] vaporized N₂O such that there is heat transfer from said effluent gas to said [inlet gas] vaporized N₂O.

23. (Amended) The system of claim 1 wherein said second throttling device is selected from the group consisting of a valve, pump, expander, orifice, regulator, or combinations thereof.

24 (Amended) A portable system to provide breathing gas to a user by decomposing nitrous oxide to a breathable mixture of oxygen and nitrogen, said system comprising the following components:

- (a) a first storage tank adapted for storing liquid nitrous oxide;
- 5 (b) a first throttling device in line with said tank, said [valve] first throttling device adapted for feeding vaporized N₂O in a controlled manner;
- (c) a thermal catalytic reactor in line with said valve, said catalytic reactor comprising a means for heating and a catalyst, said catalyst capable of creating a self sustaining decomposition of the vaporized N₂O to a mixture of approximately one-
10 third oxygen and two thirds nitrogen; said catalyst selected from the group consisting of a noble metal or transition metal, on alumina, zirconia, yttria, or a substituted crystalline zeolite support, said catalyst operating at temperatures ranging from about 250°C to 900°C;

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15 (d) a second storage tank in line with said reactor, said second storage tank
for storing a small surge volume of the resultant breathable gas mixture in a pressure
vessel;

(e) a second throttling device receiving said breathable gas mixture, said
valve feeding the breathable gas mixture in a regulated manner to the user of said
system; and

20 (f) a control system in communication with said retainer and said valve
for insuring that minimum flow is maintained to sustain reactor temperature and
which serves to increase flow to the reservoir when required.

34. (Amended) The method of claim 25 further comprising a control
system in communication with said reactor and [said] a throttling device for insuring
sufficient flow to said reactor to sustain said reaction.

5 36. (Amended) The method of claim 25 wherein [an additional] a
membrane after the reactor is added to enrich the percentage of oxygen in the
breathable gas mixture.

47. (Amended) The method of claim [25] 34 wherein said throttling device
is selected from the group of a valve, pump, expander, orifice, regulator, or
combinations thereof.